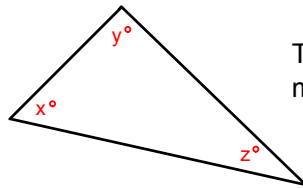


Lesson 7.3b Angle Measures of Triangles

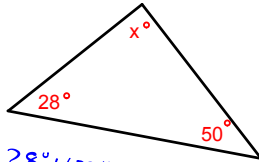
7.3b Angle Measure of a Triangle



The sum of the angle measures is 180° .

$$x^\circ + y^\circ + z^\circ = 180^\circ$$

Ex. 1



Find x.

$$x^\circ + 28^\circ + 50^\circ = 180^\circ$$

$$x^\circ + 78^\circ = 180^\circ$$

$$x = 102^\circ$$

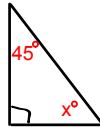
Check:

$$28^\circ + 102^\circ + 50^\circ = 180^\circ$$

$$130^\circ + 50^\circ = 180^\circ$$

$$180^\circ = 180^\circ$$

Ex. 2



Find x.

$$x^\circ + 45^\circ + 90^\circ = 180^\circ$$

$$x + 135^\circ = 180^\circ$$

$$x = 45^\circ$$

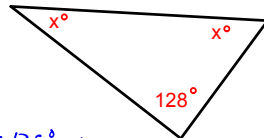
Check:

$$45^\circ + 45^\circ + 90^\circ = 180^\circ$$

$$90^\circ + 90^\circ = 180^\circ$$

$$180^\circ = 180^\circ$$

Ex. 3



Find x.

$$x^\circ + x^\circ + 128^\circ = 180^\circ$$

$$2x + 128^\circ = 180^\circ$$

$$2x = 52^\circ$$

$$x = 26^\circ$$

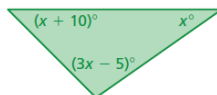
Check:

$$26^\circ + 26^\circ + 128^\circ = 180^\circ$$

$$52^\circ + 128^\circ = 180^\circ$$

$$180^\circ = 180^\circ$$

Ex. 4



Find the missing angles.

$$(x+10)^\circ + x^\circ + (3x-5)^\circ = 180^\circ$$

$$(5x+5)^\circ = 180^\circ$$

$$5x = 175^\circ$$

$$x = 35^\circ$$

Check:

$$35^\circ + 45^\circ + 100^\circ = 180^\circ$$

$$80^\circ + 100^\circ = 180^\circ$$

$$180^\circ = 180^\circ$$

$$(x+10)^\circ = 45^\circ$$

$$(3x-5)^\circ = 100^\circ$$